

METHOD AND DEVICE FOR DETECTING POLISHING END POINT OF SEMICONDUCTOR WAFER

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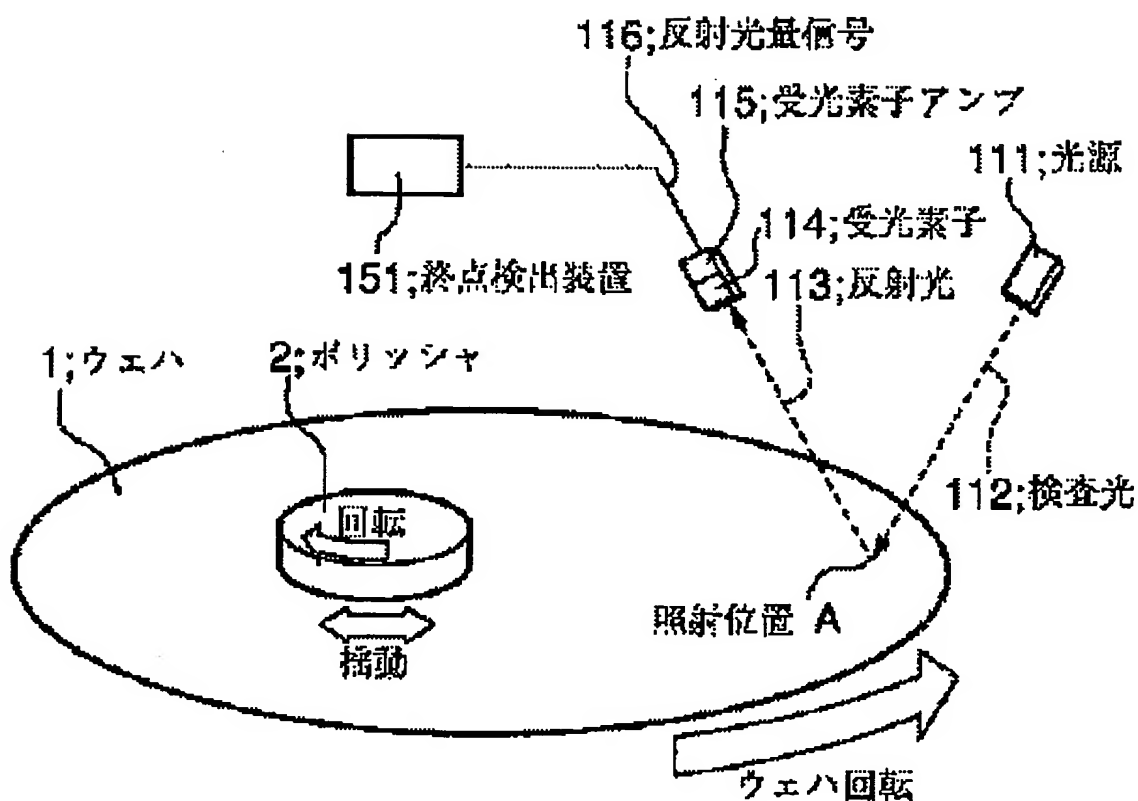
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Abstract:

PROBLEM TO BE SOLVED: To provide a method and device for detecting the polishing end point of a semiconductor wafer by which the polishing end can be accurately detected by regarding the removal of a barrier film on an insulating film as the polishing end point. **SOLUTION:** Detection light of a specified wavelength generated by a light source 111 is applied to an arbitrary position of a semiconductor wafer 1 by a specified system, and the distribution of progress of polishing on the surface of the wafer 1 is measured by using at least one measuring system which gathers a light beam of reflected light regularly reflected in the position of irradiation to a photoreceptor 114. The polishing end point is properly changed according to the polishing distribution on the surface of the semiconductor wafer 1 for obtaining an optimum polishing result. For example, a polishing end point in an arbitrary position on the wafer polishing surface is detected (by an end point device 151) for finishing polishing, or the polishing is finished in a polishing end point where the polishing is the latest. Also, the device transfers information on the wafer polishing distribution to a CMP device 900 with the intention of reducing nonuniformity of polishing. **COPYRIGHT:** (C)2002,JPO



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